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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/828,551	04/21/2004	Takahiro Amanai	061069-0309367	5450

909 7590 02/08/2005

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EXAMINER

THOMPSON, TIMOTHY J

ART UNIT	PAPER NUMBER
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2873

DATE MAILED: 02/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/828,551

Applicant(s)

AMANAI, TAKAHIRO

Examiner

Timothy J Thompson

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,3-6 and 10 is/are rejected.
- 7) ☒ Claim(s) 2 and 7-9 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>04/204</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4, 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Sato(U.S. Patent No. 5,841,590).

Regarding claim 1, Sato discloses; a first lens which is positive meniscus lens having a convex surface directed toward an object side(table 1, r3-r4), an aperture stop(table 1, aperture stop S), a second lens which is meniscus lens having a convex surface directed toward image side(table 1, r8-r9), a third lens which positive meniscus lens having a convex surface directed toward the image side(table 1, r10-r11), and a fourth lens which is a negative lens(table 1, r15-r16).

Regarding claim 4, Sato discloses $r1/f = .314$ (table 1, r3).

Regarding claim 5, Sato discloses $f_{123}/|f_4| = 1.124$ (table 1)

$F/|f_4| = 1.57$ (table 1)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sato(U.S. Patent No. 5,841,590) as applied to claim 1 above, and further in view of Miles et al.(U.S. Pat. No. 3,868,173).

Regarding claim 3 Sato discloses $v3-v4 = 16.77$. Sato does not disclose the third and forth lenses are made from plastic. However, Miles et al. discloses the third and forth lenses are made from plastic stating that a lens system made from plastic lenses is light weight, less costly to fabricate and produces brighter images(col 3, lines 25-35). It would have been obvious to one skilled in the art at the time of the invention to use plastic lenses as shown by of Miles et al., in the lens system of Sato, since as shown by Miles et al., plastic lens are commonly used in lens syst4ems for lightening the lens system, reducing the cost of the lens system and producing brighter images.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sato(U.S. Patent No. 5,841,590) as applied to claim 1 above, and further in view of Tochigi(U.S. Pat. No. 6,195,210).

Regarding claim 10 Sato does not disclose an electronic apparatus equipped with the image forming optical system. However, Tochigi discloses an electronic apparatus equipped with the image forming optical system (fig 9). It would have been obvious to one skilled in the art at the time of the invention to use an electronic apparatus equipped with the image forming optical system as shown by of Tochigi, in

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the lens system of Sato, since as shown by Tochigi, an electronic apparatus are commonly equipped with the image forming optical system so as to allow the capturing of images passing through the lens system.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Sato(U.S. Patent No. 5,841,590).

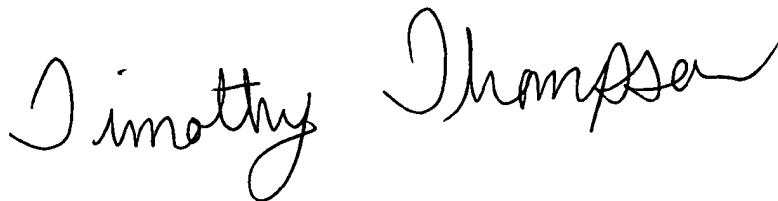
Regarding claim 1, Sato discloses; a first lens which is positive meniscus lens having a convex surface directed toward an object side(Table 1, r3-r4), an aperture stop(table 1, aperture stop S), a second lens which is meniscus lens having a convex surface directed toward image side(Table 1, r9-r10), a third lens which positive meniscus lens having a convex surface directed toward the image side(Table 1, r13-r14), and a fourth lens which is a negative lens(Table 1, r15-r16).

Regarding claim 6, Sato discloses $f1/f234 = 1.67$ (Table 1).

Conclusion

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J. Thompson whose telephone number is (571) 272-2342. If the examiner can not be reached his supervisor, Georgia Epps, can be reached on (571) 272-2328.

A handwritten signature in black ink that reads "Timothy Thompson". The signature is written in a cursive, flowing style.

TIMOTHY THOMPSON
PRIMARY EXAMINER